3D1 heavy chain variable region sequence

```
                                            30                                                60
ATG GGT TGG AAC TGT ATC ATC TTC TTT CTG GTT ACA ACA GCT ACA GGT GTG CAC TCC CAG
 M   G   W   N   C   I   I   F   F   L   V   T   T   A   T   G   V   H   S   Q

                                            90                                               120
GTC CAG CTG CAG CAG TCT GGG CCT GAG CTG GTG AGG CCT GGG GAA TCA GTG AAG ATT TCC
 V   Q   L   Q   Q   S   G   P   E   L   V   R   P   G   E   S   V   K   I   S

                                           150                                               180
TGC AAG GGT TCC GGC TAC ACA TTC ACT GAT TAT GCT ATA CAG TGG GTG AAG CAG AGT CAT
 C   K   G   S   G   Y   T   F   T   D   Y   A   I   Q   W   V   K   Q   S   H

                                           210                                               240
GCA AAG AGT CTA GAG TGG ATT GGA GTT ATT AAT ATT TAC TAT GAT AAT ACA AAC TAC AAC
 A   K   S   L   E   W   I   G   V   I   N   I   Y   Y   D   N   T   N   Y   N

                                           270                                               300
CAG AAG TTT AAG GGC AAG GCC ACA ATG ACT GTA GAC AAA TCC TCC AGC ACA GCC TAT ATG
 Q   K   F   K   G   K   A   T   M   T   V   D   K   S   S   S   T   A   Y   M

                                           330                                               360
GAA CTT GCC AGA TTG ACA TCT GAG GAT TCT GCC ATC TAT TAC TGT GCA AGA GCG GCC TGG
 E   L   A   R   L   T   S   E   D   S   A   I   Y   Y   C   A   R   A   A   W

                                           390
TAT ATG GAC TAC TGG GGT CAA GGA ACC TCA GTC ACC GTC TCC TCA
 Y   M   D   Y   W   G   Q   G   T   S   V   T   V   S   S
```

Figure 1 (A)

3D1 light chain variable region sequence

```
                                                30                                                  60
ATG GAT TCA CAG GCC CAG GTT CTT ATA TTG CTG CTG CTA TGG GTA TCT GGT ACC TGT GGG
 M   D   S   Q   A   Q   V   L   I   L   L   L   W   V   S   G   T   C   G

                                                90                                                 120
GAC ATT GTG CTG TCA CAG TCT CCA TCC TCC CTG GCT GTG TCA GCA GGA GAG AAG GTC ACT
 D   I   V   L   S   Q   S   P   S   S   L   A   V   S   A   G   E   K   V   T

                                               150                                                 180
ATG AGC TGC AAA TCC AGT CAG AGT CTG CTC AAC AGT AGA ACC CGA GAG AAC TAC TTG GCT
 M   S   C   K   S   S   Q   S   L   L   N   S   R   T   R   E   N   Y   L   A

                                               210                                                 240
TGG TAC CAG CAG AAA CCA GGG CAG TCT CCT AAA CTG CTG ATC TAC TGG GCA TCC ACT AGG
 W   Y   Q   Q   K   P   G   Q   S   P   K   L   L   I   Y   W   A   S   T   R

                                               270                                                 300
GAA TCT GGG GTC CCT GAT CGC TTC ACA GGC AGT GGA TCT GGG ACA GAT TTC ACT CTC ACC
 E   S   G   V   P   D   R   F   T   G   S   G   S   G   T   D   F   T   L   T

                                               330                                                 360
ATC AGC AGT GTG CAG GCT GAA GAC CTG GCA GTT TAT TAC TGC ACG CAA TCT TAT AAT CTT
 I   S   S   V   Q   A   E   D   L   A   V   Y   Y   C   T   Q   S   Y   N   L

                                               390
TAC ACG TTC GGA GGG GGG ACC AAG CTG GAA ATA AAA
 Y   T   F   G   G   G   T   K   L   E   I   K
```

Figure 1 (B)

Hu3D1 heavy chain variable region sequence

```
                                        30                                  60
ATG GGT TGG AAC TGT ATC ATC TTC TTT CTG GTT ACC ACA GCT ACA GGT GTG CAC TCC CAG
 M   G   W   N   C   I   I   F   F   L   V   T   T   A   T   G   V   H   S   Q

                                        90                                 120
GTC CAG CTG GTG CAG TCT GGG GCT GAG GTG AAG AAG CCT GGG AGC TCA GTG AAG GTG TCC
 V   Q   L   V   Q   S   G   A   E   V   K   K   P   G   S   S   V   K   V   S

                                       150                                 180
TGC AAA GCT TCC GGC TAC ACA TTC ACT GAT TAT GCT ATA CAG TGG GTG AGA CAG GCT CCT
 C   K   A   S   G   Y   T   F   T   D   Y   A   I   Q   W   V   R   Q   A   P

                                       210                                 240
GGA CAG GGC CTC GAG TGG ATT GGA GTT ATT AAT ATT TAC TAT GAT AAT ACA AAC TAC AAC
 G   Q   G   L   E   W   I   G   V   I   N   I   Y   Y   D   N   T   N   Y   N

                                       270                                 300
CAG AAG TTT AAG GGC AAG GCC ACA ATG ACT GTA GAC AAG TCG ACG AGC ACA GCC TAT ATG
 Q   K   F   K   G   K   A   T   M   T   V   D   K   S   T   S   T   A   Y   M

                                       330                                 360
GAA CTT AGT TCT TTG AGA TCT GAG GAT ACG GCC GTT TAT TAC TGT GCA AGA GCG GCC TGG
 E   L   S   S   L   R   S   E   D   T   A   V   Y   Y   C   A   R   A   A   W

                                       390
TAT ATG GAC TAC TGG GGT CAA GGT ACC CTT GTC ACC GTC TCC TCA
 Y   M   D   Y   W   G   Q   G   T   L   V   T   V   S   S
```

Figure 2 (A)

Hu3D1 light chain variable region sequence

```
                                                30                                                  60
ATG GAT TCA CAG GCC CAG GTT CTT ATA TTG CTG CTG CTA TGG GTA TCT GGC ACC TGT GGG
 M   D   S   Q   A   Q   V   L   I   L   L   L   L   W   V   S   G   T   C   G

                                                90                                                 120
GAC ATT GTG CTG ACA CAG TCT CCA GAT TCC CTG GCT GTA AGC TTA GGA GAG AGG GCC ACT
 D   I   V   L   T   Q   S   P   D   S   L   A   V   S   L   G   E   R   A   T

                                               150                                                 180
ATT AGC TGC AAA TCC AGT CAG AGT CTG CTC AAC AGT AGA ACC CGA GAG AAC TAC TTG GCT
 I   S   C   K   S   S   Q   S   L   L   N   S   R   T   R   E   N   Y   L   A

                                               210                                                 240
TGG TAC CAG CAG AAA CCA GGG CAG CCT CCT AAA CTG CTG ATC TAC TGG GCA TCC ACT AGG
 W   Y   Q   Q   K   P   G   Q   P   P   K   L   L   I   Y   W   A   S   T   R

                                               270                                                 300
GAA TCT GGG GTC CCT GAT CGC TTC AGT GGC AGT GGA TCT GGG ACA GAT TTC ACT CTC ACC
 E   S   G   V   P   D   R   F   S   G   S   G   S   G   T   D   F   T   L   T

                                               330                                                 360
ATC AGC AGT CTG CAG GCT GAA GAC GTG GCA GTT TAT TAC TGC ACG CAA TCT TAT AAT CTT
 I   S   S   L   Q   A   E   D   V   A   V   Y   Y   C   T   Q   S   Y   N   L

                                               390
TAC ACG TTC GGA CAG GGG ACC AAG GTG GAA ATA AAA
 Y   T   F   G   Q   G   T   K   V   E   I   K
```

Figure 2 (B)

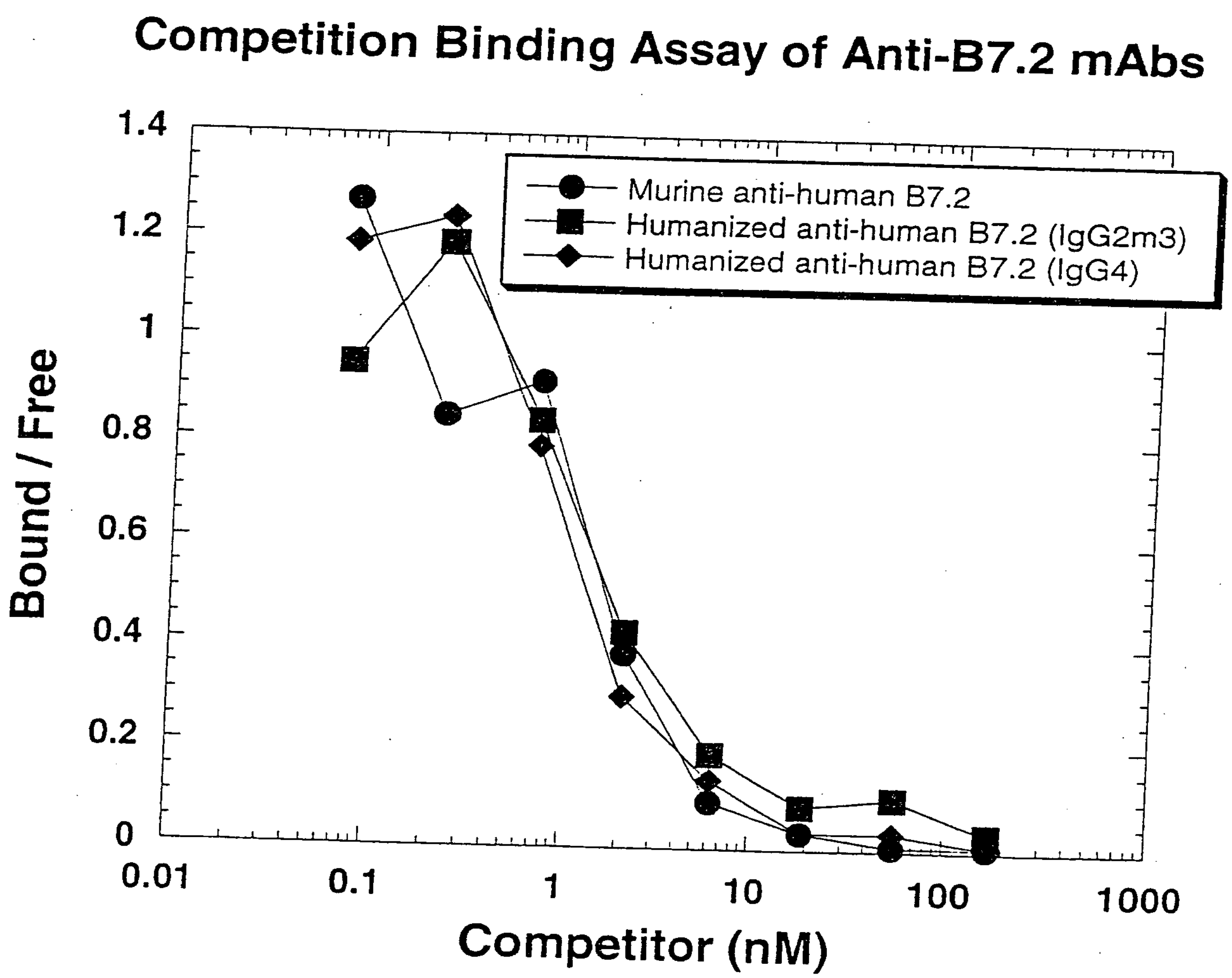
Competition Binding Assay of Anti-B7.2 mAbs
Murine anti-human B7.2
Humanized anti-human B7.2 (IgG2m3)
Humanized anti-human B7.2 (IgG4)
Bound / Free
1.4
1.2
1
0.8
0.6
0.4
0.2
0
0.01
0.1
1
10
100
1000
Competitor (nM)

Figure 3

Direct Binding Assay of Anti-B7.2 mAbs

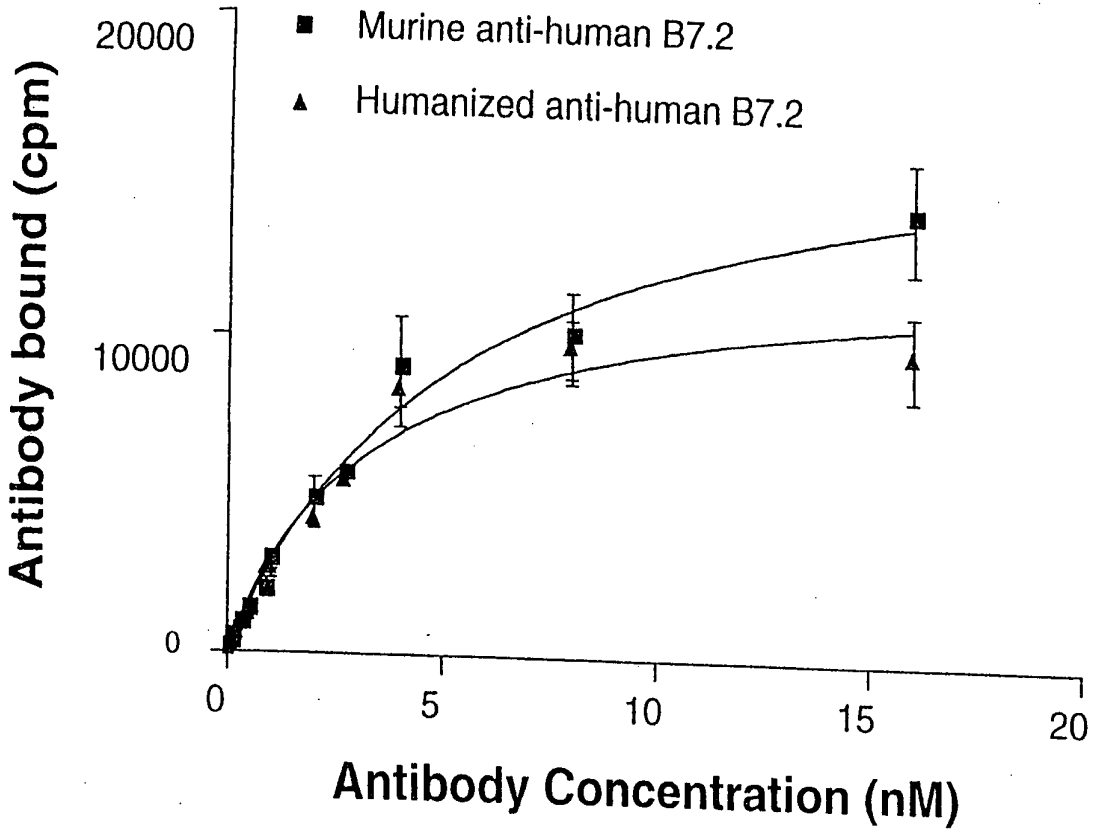

Figure 4

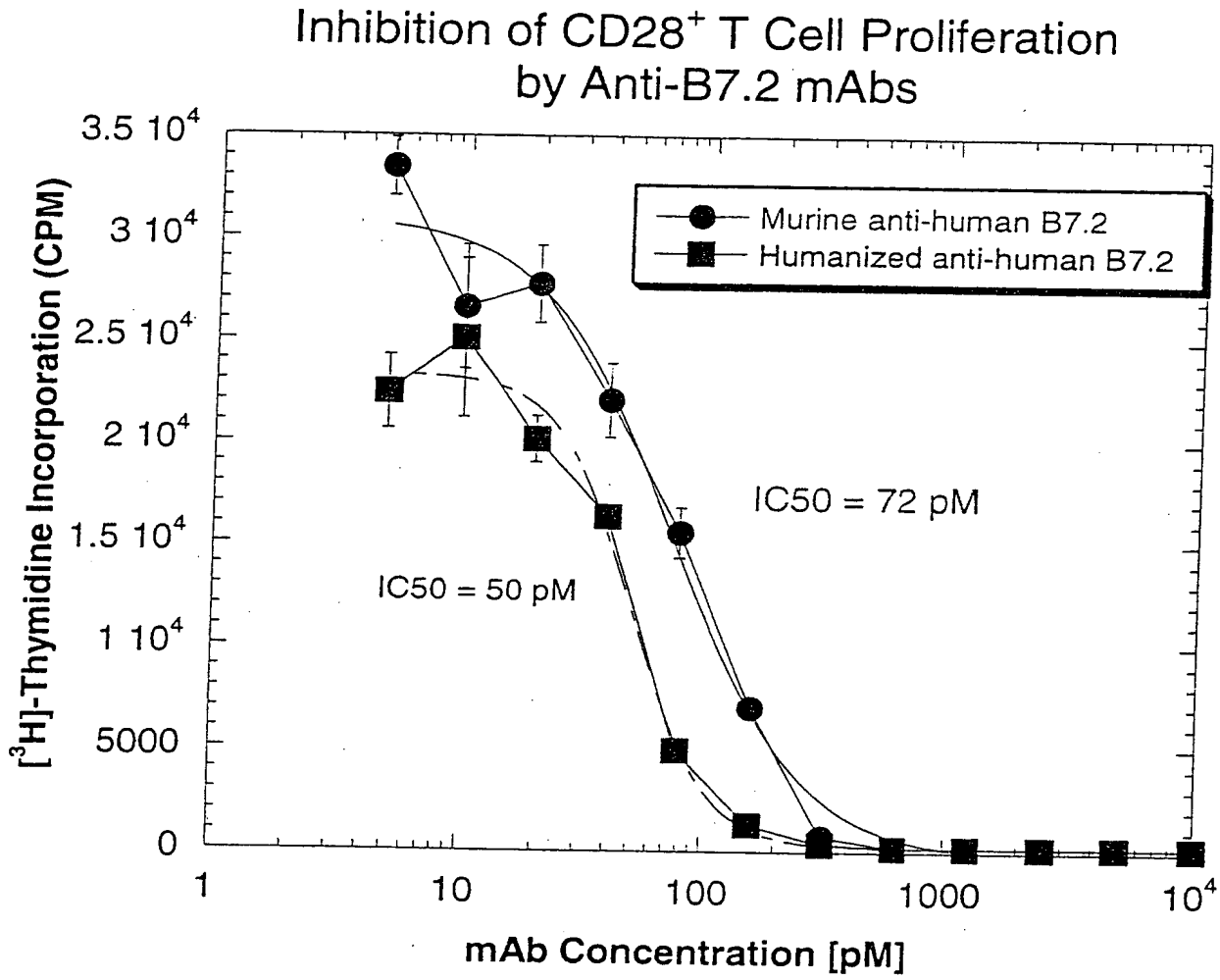
Inhibition of CD28+ T Cell Proliferation
by Anti-B7.2 mAbs
[3H]-Thymidine Incorporation (CPM)
3.5 10^4
3 10^4
2.5 10^4
2 10^4
1.5 10^4
1 10^4
5000
0
1
10
100
1000
10^4
mAb Concentration [pM]
Murine anti-human B7.2
Humanized anti-human B7.2
IC50 = 72 pM
IC50 = 50 pM

Figure 5

Inhibition of a Mixed Lymphocyte Reaction by Anti-B7 Antibodies and CTLA4IG

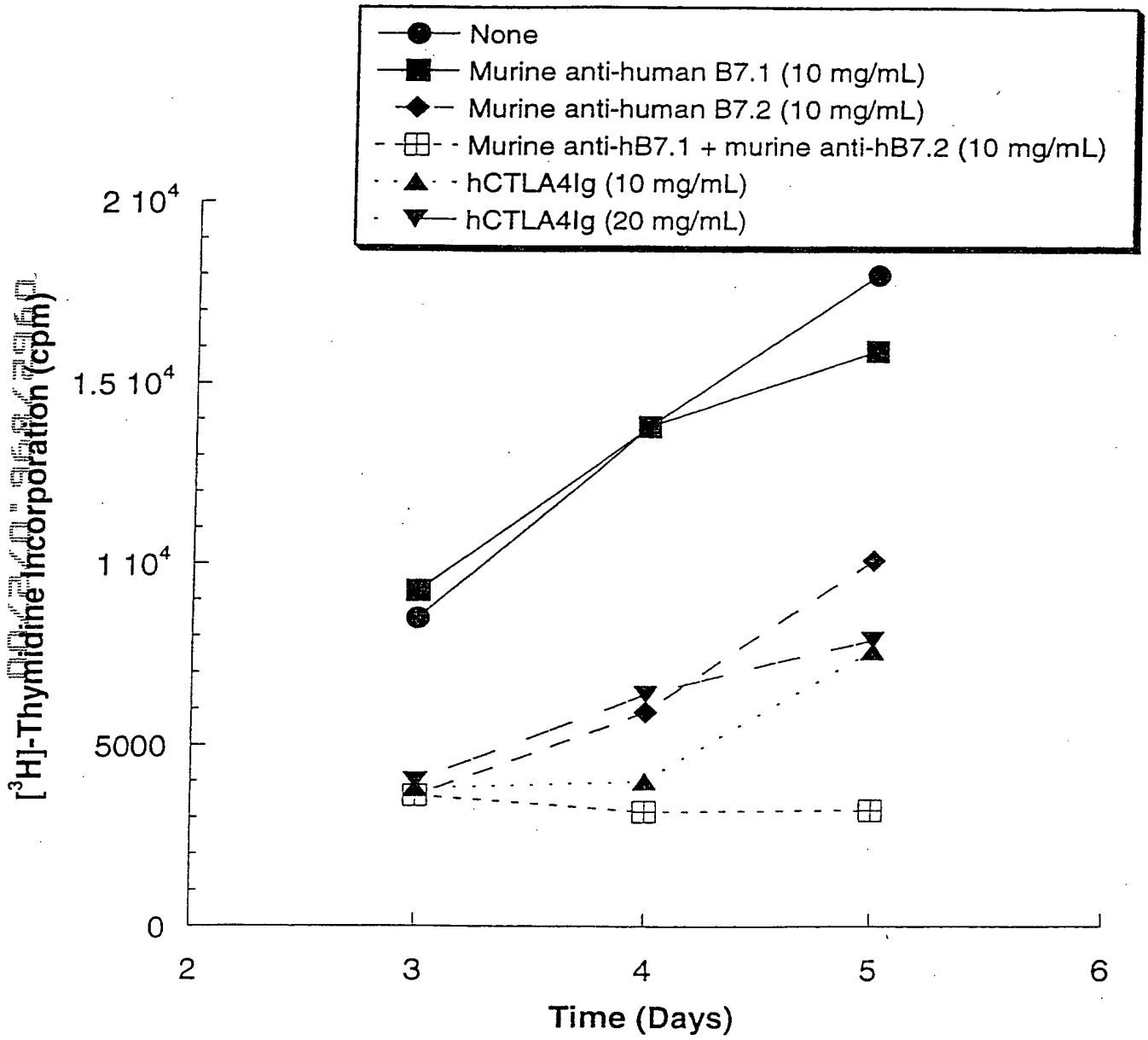

Figure 6

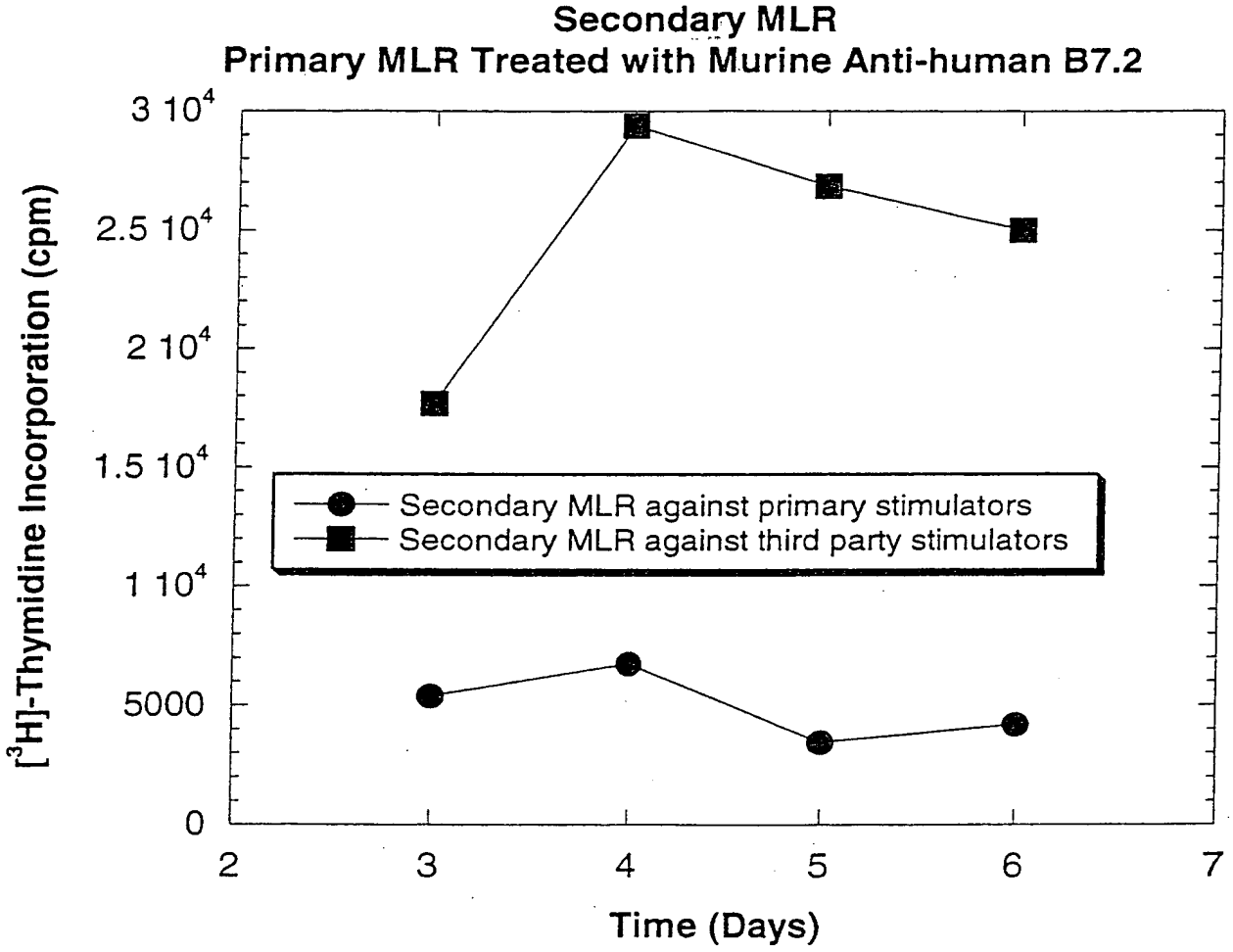
Secondary MLR
Primary MLR Treated with Murine Anti-human B7.2
[3H]-Thymidine Incorporation (cpm)
3 10^4
2.5 10^4
2 10^4
1.5 10^4
1 10^4
5000
0
2
3
4
5
6
7
Time (Days)
Secondary MLR against primary stimulators
Secondary MLR against third party stimulators

Figure 7

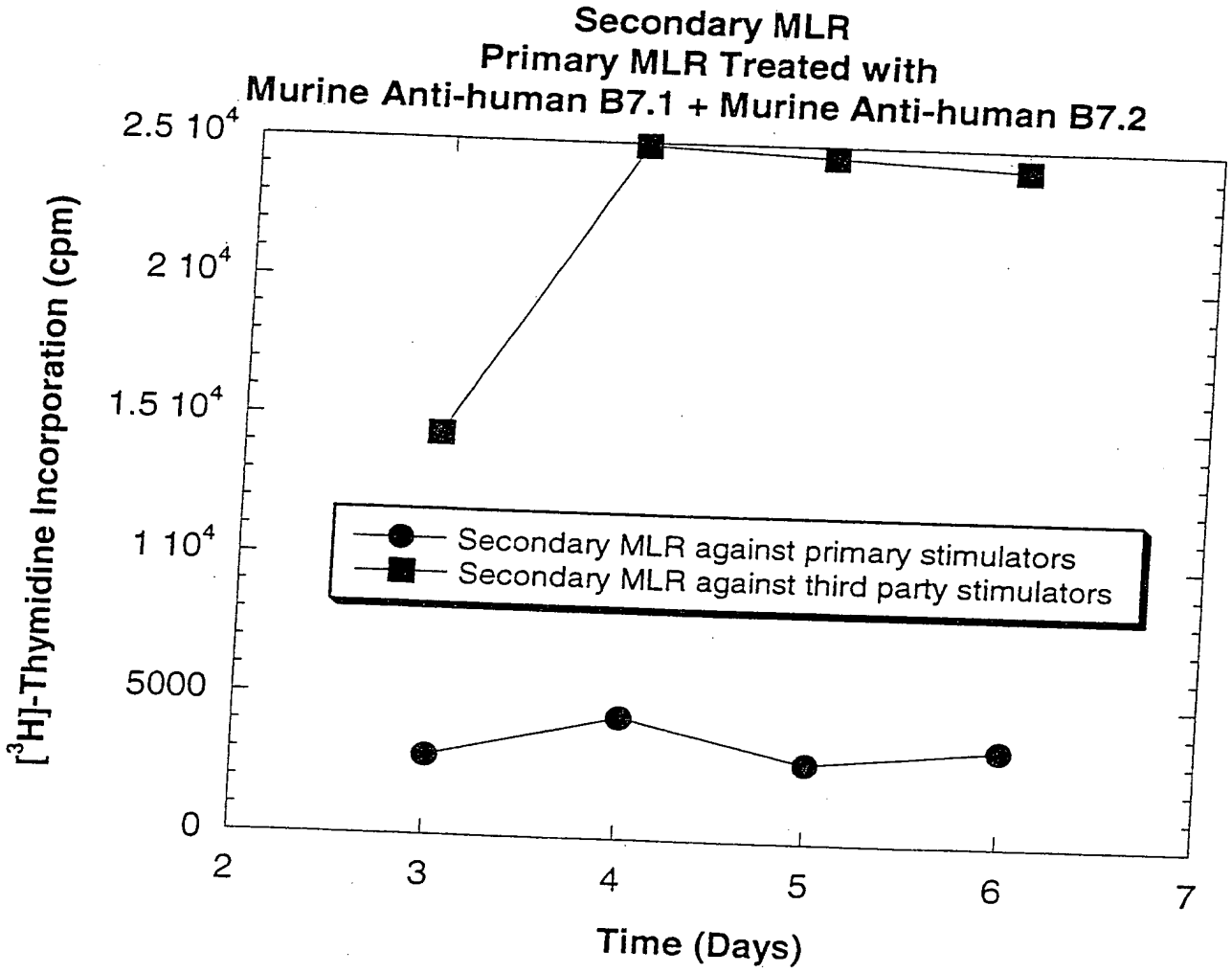
Secondary MLR
Primary MLR Treated with
Murine Anti-human B7.1 + Murine Anti-human B7.2
[3H]-Thymidine Incorporation (cpm)
2.5 10^4
2 10^4
1.5 10^4
1 10^4
5000
0
2
3
4
5
6
7
Time (Days)
Secondary MLR against primary stimulators
Secondary MLR against third party stimulators

Figure 8

Antibody Response to Tetanus Immunization During Costimulation Blockade with Humanized Anti-B7.1 and Anti-B7.2

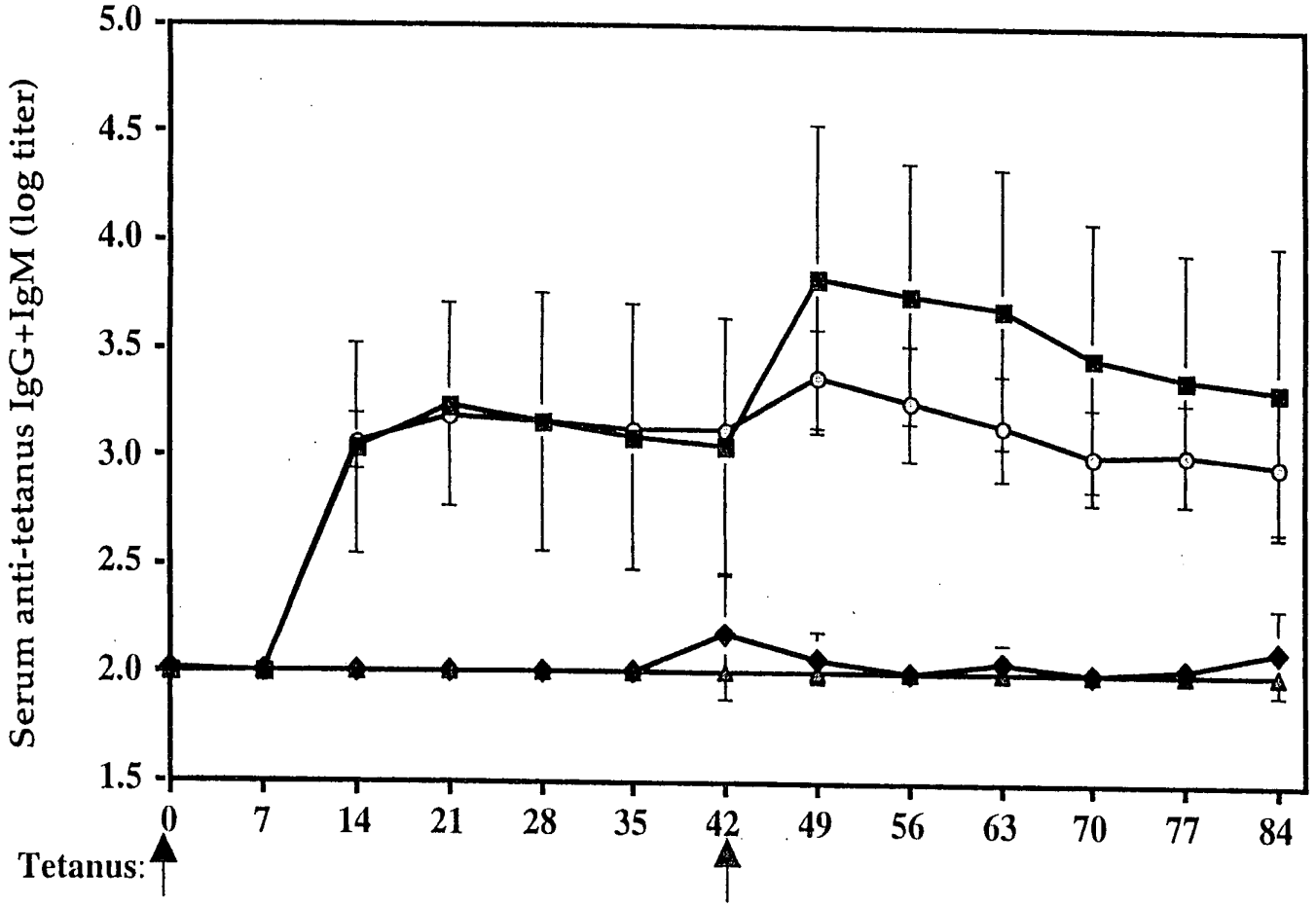

Figure 9

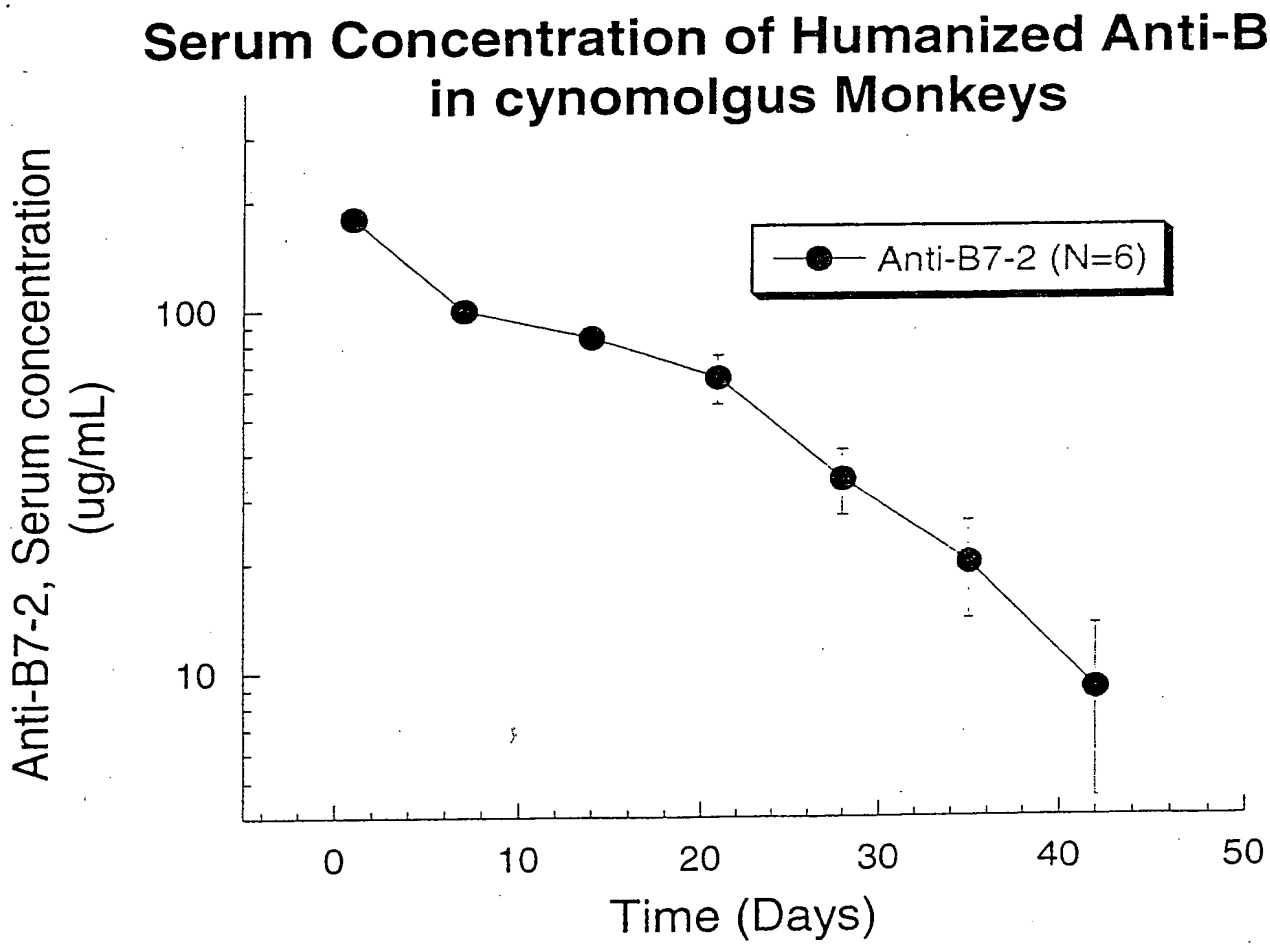
Serum Concentration of Humanized Anti-B7-2
in cynomolgus Monkeys
Anti-B7-2, Serum concentration
(ug/mL)
100
10
Anti-B7-2 (N=6)
0
10
20
30
40
50
Time (Days)

Figure 10